24. (Amended) A network controller for use with a computer system, comprising:

a transmitter coupled to receive packets of at least two different types; and

a dispatcher adapted to transmit packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.

28. (Amended) The controller of claim 24 including a device adapted to mark packets security packets or non-security packets in said first in first out memory based on attributes indicated in an internet protocol header associated with each packet.

Please cancel claims 5, 16, and 27.

REMARKS

Claims 1-4, 6-15, 17-26, and 28-30 are pending. Claims 1, 13-15, 17-24, and 28 have been amended. Claims 5, 16, and 27 have been cancelled. No new matter has been added.

Claim 1 stands rejected under 35 U.S.C. § 103 as being obvious over *Peterson et al.* (U.S. Pat. No. 5,802,051; hereinafter *Peterson*), *Akhtar* (U.S. Pat. No. 6,418,139), or *Bocking et al.* (U.S. Pat. No. 5,6,477,147; hereinafter *Bocking*) in view of either *DeGolia, Jr.* (U.S. Pat. No. 6,181,692; hereinafter *DeGolia*) or *Lockhart et al.* (U.S. Pat. No. 6,229,806; hereinafter *Lockhart*).

Independent claim 1, as amended, recites a method for use with a computer system. The method includes receiving packets of at least two types and *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Peterson fails to teach or suggest a method that includes *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Peterson describes an apparatus and method for multiplexing user data packets into a data stream prior to transmission. A transmission priority code is assigned to each segmented user data packet based on the type of data contained therein. Data that is highly sensitive to transmission delays (e.g., voice data) is assigned a high priority, while data that is less sensitive

to transmission delays (e.g., signal strength measurement data) is assigned a lower priority. When the user data packet segments are assembled into segment minicells and multiplexed into an ATM cell stream, those with the highest priority will be inserted first, so that they experience the least amount of transmission delay. The method described by *Peterson* describes transmitting packets of one type ahead of packets of another type, wherein packets that are more sensitive to transmission delays are bypassed in favor of packets that are less sensitive to transmission delays based (*Peterson*, col 3, lines 20-23 and col. 5, lines 18-25); whereas, the method of independent claim 1, as amended, recites *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Akhtar fails to teach or suggest a method that includes *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Akhtar describes a system and a method for routing of real time data traffic on a communications network. Gatekeepers are interlinked to form a network wherein the gatekeepers control bandwidth and routing of data packets towards destination terminals. Routers aggregate real time flow of data packets through the gatekeepers. Terminals are connected to the network via the gatekeepers and negotiate connection parameters. The method described by *Akhtar* relates to transmitting packets through the shortest path (*Akhtar*, col 4, lines 41-48); whereas, the method of independent claim 1, as amended, recites *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Bocking fails to teach or suggest a method that includes *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.*

Bocking describes a method and arrangement for transmitting a data packet in the Ethernet from a first arrangement to at least a second arrangement, wherein the data packet is assigned a priority class and labeled accordingly before being transmitted. Data streams with real-time requirements (e.g., sound data streams, video data streams, alarm messages for controlling machines) may require a higher priority than other types of data flows, because such data streams require a certain minimum quality during their transmission. The method

described by *Bocking* ensures the required quality for data packets which require a higher priority because of quality requirements relating to real-time requirements during transmission. In other words, the method described by *Bocking* transmits packets of one type ahead of packets of another type, wherein packets that are more sensitive to transmission delays are bypassed in favor of packets that are less sensitive to transmission delays based (*Bocking*, col. 1, lines 20-30 and 54-58; col. 1, line 64 – col. 2, line 4); whereas, the method of independent claim 1, as amended, recites *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process*.

DeGolia fails to remedy the failure of *Peterson, Akhtar,* and *Bocking* to teach or suggest a method that includes *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process*.

DeGolia describes a method for expediting transmission of data in a packet-oriented data network, an enhanced Internet-connected source server, and a system for data transmission. According to *DeGolia*, an executive software agent is spawned, wherein the agent is associated with data at a source server. The agent is transmitted in lieu of the data associated with the agent by one or more routes to a destination. Information regarding the routes is collected, and a best route is determined, based on the information collected by the agent. *DeGolia* is not relevant at all to the method described by independent claim 1, as amended. The executive software agent described by *DeGolia* is not transmitted ahead of the associated data. Instead, it is transmitted in lieu of the associated data. Moreover, the method described by *DeGolia* does not include bypassing packets that take longer to process in favor of packets that take less time to process.

Lockhart fails to remedy the failure of *Peterson, Akhtar,* and *Bocking* to teach or suggest a method that includes *transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process*.

Lockhart describes a communications system and a method of communicating therein. According to *Lockhart*, a user device generates authentication information unique to the user device and provides a data packet that includes the authentication information to a gateway or a host. The packet further includes a host identifier or time-dependent information, which is used

at the gateway or the host to authenticate the packet. If the correct authentication information matches the information in the data packet, the packet is delivered to the destination host. If the information does not match, the packet is discarded. *Lockhart* is not relevant at all to the method described by independent claim 1, as amended. The method described by *Lockhart* does not include *transmitting packets of one type ahead of packets of another type.* Moreover, the method described by *DeGolia* does not include bypassing packets that take longer to process in favor of packets that take less time to process. Instead, a packet in *Lockhart* is merely transmitted or discarded, based on the authentication information included in the packet.

Independent claims 13 and 24, both as amended, each recite limitations similar to those of independent claim 1, as amended, and therefore also distinguish over *Peterson*, *Akhtar*, and *Bocking* in view of either *DeGolia,* or *Lockhart* for the same reasons set forth above with respect to independent claim 1, as amended.

Attached is an Appendix, which shows the changes to the claims. The Examiner is encouraged to review those changes to ensure that the claims, as set forth herein, correspond accurately to the claims in the appendix and no inadvertent errors have occurred.

In view of these amendments and remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested.

Respectfully submitted,

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APPENDIX

1. (Amended) A method for use with a computer system, comprising:

receiving packets of at least two types; and

transmitting packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.

5. Canceled.

13. (Amended) An article comprising a medium [for] storing instructions that, if executed, enable [cause] a processor-based system to:

receive packets of at least two types; and

transmit packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.

14. (Amended) The article of claim 13 further storing instructions that, if executed, enable [cause] a processor-based system to transmit non-security packets to be transmitted ahead of security packets.

15. (Amended) The article of claim 13 further storing instructions that, if executed, enable [cause] a processor-based system to monitor an input queue and fetch one type of packet to bypass another type of packet for transmission.

16. Canceled.

17. (Amended) The article of claim 13 further storing instructions that, if executed, enable [cause] a processor-based system to receive packets to be transmitted in a first in first out memory, check each packet to determine its security status and provide a pointer to the packet based on its security status.

18. (Amended) The article of claim 17 further storing instructions that, if executed, enable [cause] a processor-based system to organize a plurality of packets in a first in first out memory as a linked list of packet blocks.

19. (Amended) The article of claim 18 further storing instructions that, if executed, enable [cause] a processor-based system to mark each of said packet blocks in said first in first out memory as being either a security packet or a non-security packet.

20. (Amended) The article of claim 19 further storing instructions that, if executed, enable [cause] a processor-based system to mark packets as security or non-security packets depending on the attributes that are indicated in an internet protocol header associated with each packet.

21. (Amended) The article of claim 20 further storing instructions that, if executed, enable [cause] a processor-based system to provide a pointer that points to a security packet.

22. (Amended) The article of claim 21 further storing instructions that, if executed, enable [cause] a processor-based system to provide pointers for non-security packets and to select between pointers to security packets and non-security packets for transmission of said packets.

23. (Amended) The article of claim 22 further storing instructions that, if executed, enable [cause]a processor-based system to select among pointers based on a round robin priority basis.

24. (Amended) A network controller for use with a computer system, comprising:

a transmitter coupled to receive packets of at least two different types; and

a dispatcher adapted to transmit packets of one type ahead of packets of another type, wherein packets that take longer to process are bypassed in favor of packets that take less time to process.

27. Canceled.

28. (Amended) The controller of claim [27] 24 including a device adapted to mark packets security packets or non-security packets in said first in first out memory based on attributes indicated in an internet protocol header associated with each packet.